AMENDMENTS TO THE CLAIMS

Please cancel claims 18 and 19 without prejudice or disclaimer of the subject matter set forth therein.

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of claims:

1-19. (canceled)

20. (currently amended) An ~~The~~ isolated polynucleotide ~~according to claim 18, which is isolated from maize plant (Zea mays L)~~ encoding an aldehyde oxidase enzyme, wherein said enzyme oxidizes an aldehyde compound to a carboxylic acid, and wherein said polynucleotide has a sequence selected from the group consisting of:

(a) a nucleotide sequence encoding an amino acid sequence shown by SEQ ID NO: 2;

(b) a nucleotide sequence shown by SEQ ID NO: 1;

(c) a nucleotide sequence encoding an amino acid sequence shown by SEQ ID NO: 4;

(d) a nucleotide sequence shown by SEQ ID NO: 3; and

(e) a nucleotide sequence encoding an amino acid sequence of about a 4.4 Kbp gene obtainable from maize plant (Zea mays L), wherein said gene of about 4.4 Kbp is amplifiable with a

combination of a PCR primer selected from the group consisting of SEQ ID NO: 7, SEQ ID NO: 8, and SEQ ID NO: 13 and a PCR primer selected from the group consisting of SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 14, and SEQ ID NO: 15.

21. (currently amended) The isolated polynucleotide according to claim ~~19, which is isolated from maize plant (Zea mays L)~~ 20, wherein the aldehyde compound is indoleacetaldehyde and the carboxylic acid is indoleacetic acid.

22. (currently amended) A plasmid comprising a polynucleotide encoding an aldehyde oxidase enzyme, wherein said enzyme oxidizes an aldehyde compound to a carboxylic acid, and wherein said polynucleotide has a sequence selected from the group consisting of:

(a) a nucleotide sequence encoding an amino acid sequence shown by SEQ ID NO: 2;

(b) a nucleotide sequence shown by SEQ ID NO: 1;

(c) a nucleotide sequence encoding an amino acid sequence shown by SEQ ID NO: 4;

(d) a nucleotide sequence shown by SEQ ID NO: 3; and

(e) a nucleotide sequence encoding an amino acid sequence of about a 4.4 Kbp gene obtainable from a maize plant (Zea mays L), wherein said gene of about 4.4 Kbp is amplifiable with a

combination of a PCR primer selected from the group consisting of SEQ ID NO: 7, SEQ ID NO: 8, and SEQ ID NO: 13 and a PCR primer selected from the group consisting of SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 14, and SEQ ID NO: 15.

23. (previously presented) A transformed host cell transformed by introducing the plasmid according to claim 22 into a host cell.

24. (previously presented) The transformed host cell according to claim 23, wherein the host cell is a microorganism.

25. (previously presented) The transformed host cell according to claim 23, wherein the host cell is a plant cell.

26. (currently amended) A process of constructing an expression plasmid which comprises ligating in a functional manner

(1) a promoter capable of functioning in a plant cell upstream from,

(2) a polynucleotide encoding an aldehyde oxidase enzyme, wherein said enzyme oxidizes an aldehyde compound to a carboxylic acid, and wherein said polynucleotide has a sequence selected from the group consisting of:

(a) a nucleotide sequence encoding an amino acid sequence shown by SEQ ID NO: 2;

(b) a nucleotide sequence shown by SEQ ID NO: 1;

(c) a nucleotide sequence encoding an amino acid sequence shown by SEQ ID NO: 4;

(d) a nucleotide sequence shown by SEQ ID NO: 3; and

(e) a nucleotide sequence encoding an amino acid sequence of about a 4.4 Kbp gene obtainable from a maize plant (Zea mays L), wherein said gene of about 4.4 Kbp is amplifiable with a combination of a PCR primer selected from the group consisting of SEQ ID NO: 7, SEQ ID NO: 8, and SEQ ID NO: 13 and a PCR primer selected from the group consisting of SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 14, and SEQ ID NO: 15, and

(3) a terminator functional in a plant downstream from the polynucleotide (2).

27. (currently amended) An expression plasmid comprising:

(1) a promoter capable of functioning in a plant cell,

(2) a polynucleotide encoding an aldehyde oxidase enzyme, wherein said enzyme oxidizes an aldehyde compound to a carboxylic acid, and wherein said polynucleotide has a sequence selected from the group consisting of:

(a) a nucleotide sequence encoding an amino acid sequence shown by SEQ ID NO: 2;

(b) a nucleotide sequence shown by SEQ ID NO: 1;

(c) a nucleotide sequence encoding an amino acid sequence shown by SEQ ID NO: 4;

(d) a nucleotide sequence shown by SEQ ID NO: 3; and

(e) a nucleotide sequence encoding an amino acid sequence of about a 4.4 Kbp gene obtainable from a maize plant (Zea mays L), wherein said gene of about 4.4 Kbp is amplifiable with a combination of a PCR primer selected from the group consisting of SEQ ID NO: 7, SEQ ID NO: 8, and SEQ ID NO: 13 and a PCR primer selected from the group consisting of SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 14, and SEQ ID NO: 15, and

(3) a terminator capable of functioning in a plant which are ligated in a functional manner and in the order described above.

28. (currently amended) A process for controlling production of an aldehyde oxidase in a transformed host cell which comprises introducing into a host cell an expression plasmid comprising:

(1) a promoter functional in a plant cell upstream from,

(2) a polynucleotide encoding an aldehyde oxidase enzyme, wherein said enzyme oxidizes an aldehyde compound to a carboxylic acid, and ~~having a nucleotide~~ wherein said

polynucleotide has a sequence selected from the group consisting of:

(a) a nucleotide sequence encoding an amino acid sequence shown by SEQ ID NO: 2;

(b) a nucleotide sequence shown by SEQ ID NO: 1;

(c) a nucleotide sequence encoding an amino acid sequence shown by SEQ ID NO: 4;

(d) a nucleotide sequence shown by SEQ ID NO: 3; and

(e) a nucleotide sequence encoding an amino acid sequence of about a 4.4 Kbp gene obtainable from a maize plant (Zea mays L), wherein said gene of about 4.4 Kbp is amplifiable with a combination of a PCR primer selected from the group consisting of SEQ ID NO: 7, SEQ ID NO: 8, and SEQ ID NO: 13 and a PCR primer selected from the group consisting of SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 14, and SEQ ID NO: 15, and

(3) a terminator functional in a plant and downstream from the polynucleotide (2), which are ligated in a functional manner to transform said host cell whereby the production of aldehyde oxidase of the transformed host is controlled.

29. (previously presented) The process according to claim 28, wherein the host cell is a plant cell.

30. (previously presented) The process according to claim 28, wherein the expression plasmid according to claim 27 is used.

31. (previously presented) An isolated polynucleotide encoding an aldehyde oxidase enzyme, wherein said polynucleotide has a nucleotide sequence encoding an amino acid sequence shown by SEQ ID NO:2.

32. (previously presented) An isolated polynucleotide encoding an aldehyde oxidase enzyme, wherein said polynucleotide has a nucleotide sequence encoding an amino acid sequence shown by SEQ ID NO:4.

33. (previously presented) An isolated polynucleotide encoding an aldehyde oxidase enzyme, wherein said polynucleotide has a nucleotide sequence shown by SEQ ID NO: 1 or 3.

REMARKS

Status of the claims:

With the above amendments, claims 18 and 19 have been canceled, claims 20, 21, 22, 26, 27, and 28 have been amended. Thus, claims 20-33 are pending and ready for further action on the merits. No new matter has been added by way of the above amendments. Support for the amendment to claim 20 comes from claims 18 and 19 and also at page 22, lines 6 *et seq.* All other amendments have support at page 15, line 20 or are simply for form or to correct dependencies. Reconsideration is respectfully requested in light of the following remarks.

Rejections under 35 U.S.C. § 112, first paragraph

Written Description

Claims 18-30 have been rejected under 35 USC §112, first paragraph for allegedly insufficient written description.

Applicants have amended independent claim 20 to include the elements of claim 18 and have also amended the claim to recite that the sequences in part e) of claim 20 are obtained from a maize plant. Thus, it is submitted that because a representative number of species have been presented in the written description, one of skill in the art would recognize that Applicants had full possession of the invention at the time of filing.

For the reasons above, Applicants submit that the rejection has been obviated. Withdrawal of the rejection is warranted and respectfully requested.

Enablement

Claims 18-30 also remain rejected under 35 USC §112, first paragraph for allegedly lacking enablement. The Examiner asserts that claims 18-30 are not enabled for the scope of the claims.

As was pointed out above, Applicants have amended newly independent claim 20 to contain the elements of claim 18 while at the same time reciting that the primer sequences enumerated in part e) of claim 20 come from a maize plant. It is believed that with this amendment that the full scope of the claims are enabled so that one of skill in the art could practice the entire scope of the claimed invention without undue experimentation.

Thus, in view of the above, Applicants submit that the rejection has been obviated. Withdrawal of the rejection is warranted and respectfully requested.

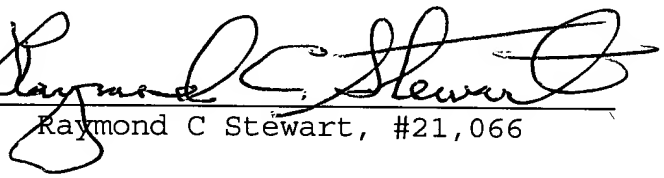
With the above remarks and amendments, it is believed that the claims, as they now stand, define patentable subject matter such that a passage of the instant invention to allowance is warranted. A Notice to that effect is earnestly solicited.

If any questions remain regarding the above matters, please contact Applicant's representative, T. Benjamin Schroeder (Reg. No. 50,990), in the Washington metropolitan area at the phone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By 
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